



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Martin Joso) Group Art Unit: 1616
Application No.: 10/717,523) Examiner: James Henry Alstrum-
Filed: November 21, 2003) Acevedo
For: NON-AEROSOL/AEROSOL) Confirmation No.: 8425
DISPENSING OF SUNSCREEN)
SPRAYS COMPRISING SILICA)
MICROPARTICLES)

DECLARATION BY MARTIN JOSO UNDER 37 C.F.R. § 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

I, Martin Joso, hereby state as follows:

- 1) I was awarded a PhD in Organic Chemistry from Wayne State University in Detroit, Michigan, in 1992, and a Chemical Engineering degree from ESCIL, Lyon, France in 1987.
- 2) Currently I am a Research Scientist in the Department of Suncare products development at L'Oréal.
- 3) I am aware that Examiner Alstrum-Acevedo in the above-identified application has rejected the claimed subject matter under 35 U.S.C. § 103(a) as being unpatentable over Iijima (U.S. Patent No. 6,258,857) in view of Fankhauser (U.S. 2002/0155073); Iijima in view of Torgerson (U.S. Patent No. 6,458,906); and Iijima in view of Torgerson and further in view of Candau (U.S. Patent No. 6,033,648). For at least the reasons set forth below, I respectfully disagree with the Examiner's conclusions.
- 4) I have conducted research in the field of Cosmetic Science, specifically Suncare research for 12 years. Based on my 12 years of experience, it is my professional opinion that none of the cited references, alone or in combination, disclose or fairly suggest a device or composition comprising an emulsion and a photoprotective system capable of screening UV radiation, as recited in independent Claims 1 and 30. In addition, I respectfully

submit that none of the cited references, alone or in combination, disclose or fairly suggest a device comprising an emulsion and a photoprotective system and further comprising a means to place the composition comprising the emulsion and photoprotective system under pressure as further recited in Claim 1.

5) I believe that Iijima is directed to concentrated internal liquid compositions in a releasing container. The composition of Iijima is generally in the form of an aqueous lotion with dispersed particles of porous silica therein carrying an active compound. The particles are used in association with a synthetic resin and/or acrylate acid polymer in the presence of an alkaline agent. The active compound may be a perfume, insect repellent, deodorant, plant extract, etc. Nowhere, however, does Iijima disclose or fairly suggest an emulsion comprising a photoprotective system capable of screening out UV radiation and spherical microparticles of porous silica.

6) Based on my review of Iijima, Examples 1-9 appear to be specifically directed to hydroalcoholic lotions containing porous silica carrying active ingredients, which, in my expert opinion, do not constitute UV screening agents, but are instead insect repellants such as, for example, DEET, or antiperspirants such as, for example, Aluminum Hydroxide Chloride.

7) In addition, Iijima does not disclose or fairly suggest using porous silica particles in a composition in the form of an emulsion comprising a) a photoprotective system capable of screening out UV radiation and b) spherical microparticles of porous silica, wherein the composition is conditioned in a pressurized device.

8) Furthermore, although Iijima appears to disclose compositions that may contain surfactants, Iijima discloses the possibility of including surfactants useful only to enhance the dispersion performance of the porous fine particles, not to form emulsions. (See Iijima, for example, at col. 12, lines 60-64 and col. 13, first paragraph.) In my opinion, the secondary references do not overcome these deficiencies.

9) To further support my position that the claimed subject matter is not obvious in view of the cited references, alone or in combination, I conducted comparative tests. My comparative tests were carried out with 1) anti-sun formulation A in the form of hydroalcoholic lotion according to Iijima capable of being packaged as a non-aerosol spray

and capable of being dispensed in the form of fine particles and 2) an anti-sun formulation B in the form of an emulsion according to the present claims capable of being packaged as a non-aerosol spray and capable of being dispensed in the form of fine particles.

Formulation A: Hydro-alcoholic Lotion (Prior Art)	Quantity % by weight
BENZOPHENONE-3	6
C12-15 ALKYL BENZOATE (FINSOLV TN)	15
POLYETHYLENE (ACUMIST B-6)	0,8
SILICA (SILICA BEADS SB 150)	2,5
DENATURATED ALCOHOL	68,7
WATER	7

Formulation B: Emulsion (Invention)	Quantity % by weight
GLYCERYL STEARATE + PEG-100 STEARATE (ARLACEL 165)	1
CETYL ALCOHOL	0,5
BENZOPHENONE-3	6
C12-15 ALKYL BENZOATE (FINSOLV TN)	15
SILICA (SILICA BEADS SB 150)	2,5
PRESERVATIVE	QS
WATER	73,4

The two formulations were then tested to determine the sun protection factor (SPF) provided by each of these formulations. The results presented in the Tables below (also present in applicants response of August 14, 2006) clearly show that the addition of the spherical microparticles of porous silica to an emulsion containing a UV filter (benzophenone-3s) makes it possible to significantly increase sun protection factor (SPF) by more than 100%. This is an unexpected and surprising result.

Composition	A (Prior art)	B (Invention)
	Hydro-alcoholic Lotion	Emulsion
Mean SPF (standard deviation)	4,2 (0,5)	8,9 (0,5)

Accordingly, I submit that the claimed subject matter is non-obvious over the cited prior art references, alone or in combination, for at least the additional reason that the claimed combination of features provides unexpected results in the area of sun protection factor which is neither disclosed nor suggested by the cited references.

10) I further understand that the Examiner has indicated that the above comments and data are unpersuasive because it is "unclear how Applicant obtained the alleged 'prior art composition.'" Despite the Examiner's statement that it appears that "Applicant selectively picked from the teachings of Iijima while ignoring others to obtain a composition that would support their arguments," I submit that I prepared the prior art composition following the steps indicated below.

I had to compare an aqueous composition according to US6,258,857 of Iijima et al containing microparticles of porous silica and a UV filter to an emulsion according to the invention containing microparticles of porous silica and a UV filter. I tried to compare two compositions which were as close as possible.

I selected the embodiment 6 of Iijima containing 2.5% of silica, 0.8% of polyethylene powder, an active ingredient (7% DEET and 2.5% 1,3 butylene glycol) and 87.2% ethanol. I replaced the active ingredients by 6% benzophenone-3 as a UV filter (maximum authorized under the US Sunscreen Monograph). I used an appropriate solvent : C12-15 alkyl benzoate (FINSOLV TN) in an amount sufficient to dissolve the UV filter. Finally, I added water to obtain a stable aqueous composition.

The embodiment 9 containing 15% of water was not appropriate for preparing a stable homogenous hydro-alcoholic composition with 6% of benzophenone-3 and 15% alkyl benzoate (oil) because we believed that using such an amount of water would cause phase separation due to the amount of oil and benzophenone-3 present in the formula.

Thus, the compositions compared are in fact a fair composition representing compositions taught by Iijima and those within the scope of the claims in the instant application. Accordingly, the comparative data confirming the non-obviousness of the claimed subject matter is persuasive and I respectfully request that the Examiner give it appropriate consideration.

I HEREBY DECLARE that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: December 5th 2007

Martin Joso
(Martin Joso)